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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/327,713	06/08/1999	KIMIHIKO NISHIOKA	PM260332	5810
909 7590 12/19/2006 PILLSBURY WINTHROP SHAW PITTMAN, LLP P.O. BOX 10500 MCLEAN, VA 22102			EXAMINER CHIEN, LUCY P	
			ART UNIT	PAPER NUMBER
			2871	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/19/2006	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/327,713

Applicant(s)

NISHIOKA, KIMIHIKO

Examiner

Lucy P. Chien

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-42, 48, 49, 84, 86, 88, 92-98, 116, 117 and 126 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 40-42, 48, 49, 84, 86, 88, 92-98, 116, 117 and 126 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Arguments

Applicant's arguments, see page 6, (the underlined paragraph), filed 11/29/2006, with respect to Claim 48 has not been objected to or rejected have been fully considered and are persuasive.

Applicant's arguments with respect to claim 40-42,48,49,77,78,84,86,88 have been considered but are moot in view of the new ground(s) of rejection.

The affidavit 1.132 filed on 11/29/2006 under 37 CFR 1.131 is sufficient to overcome the Nishioka et al (US 6888590) reference.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 40,49,84,86,93-98 are rejected under 35 U.S.C. 102(b) as being anticipated by Togino (US 5513041).

Regarding Claim 40,

Togino discloses (Fig. 5) an optical system that forms a two-dimensional image (ABSTRACT), the optical system comprising a variable optical-property mirror (3) wherein the variable optical-property mirror (3) is arranged to be decentered (as shown in Figure 5) from a light incident –side optical axis, and wherein the variable optical-property mirror (3) has a reflecting surface that is deformable (column 6, rows 18-24).

Regarding Claim 93

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Togino discloses (Fig. 5) wherein the optical system forms an image surface (14) on an exit side thereof, and the optical system further comprises an optical element (8, where 15 is located) arranged between the image surface (14) and the reflecting surface (3) of the variable optical property mirror (3)

Regarding Claim 94.

Togino discloses (Fig. 5) the optical system further comprises an optical element (8 also 3) having a rotationally asymmetric optical surface.

Regarding Claim 95.

Togino discloses (Fig. 5) the optical system further comprises a rotationally asymmetric reflecting surface (3) where the rotationally asymmetric reflecting surface is arranged to be tilted in reference to an optical axis of the optical system.

Regarding Claim 96.

Togino discloses (Fig. 5) the rotationally asymmetric reflecting surface defines only one plane of symmetry.

Regarding Claim 97.

Togino discloses (Fig. 5) the optical system further comprises an optical element that has a plurality of rotationally asymmetric optical surfaces (8)

Regarding Claim 98.

Togino discloses (Fig. 5) the plurality of rotationally asymmetric curved surfaces are provided on a single optical element (3).

Regarding Claim 49.

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Togino discloses (Fig. 5) a variable optical property mirror (3) and an optical element having a light-deflecting function (8) and disposed after the variable optical property mirror (3) in a single traveling path of rays (rays from 2 to 14) wherein a shape of a reflecting surface of the variable optical property mirror (3) is deformable (mirror shaped as a U shape) (Column 8, rows 6-17), wherein the variable optical property mirror (3) is arranged to be decentered from a light incident side optical axis, and the optical element is rotationally asymmetric surface having a shape that defines only one plane of symmetry.

Regarding Claim 84.

Togino discloses (Fig. 5) a variable optical property element (14) having a light-deflecting function and a rotationally asymmetric reflecting surface (3) wherein the rotationally asymmetric reflecting surface (3) defines only one plane of symmetry, and wherein the variable optical-property element and the rotationally asymmetric reflecting surfaces are arranged to be decentered from one another.

Regarding Claim 86.

Togino discloses (Fig. 5) where the variable optical-property element is a reflection type element.

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Claims 41,88,116,117 are rejected under 35 U.S.C. 102(b) as being anticipated by Gobeli (US 4932768).

Regarding Claim 116.

Gobeli discloses (Fig. 8,9,10) a reflection type variable optical-property element (68,70) having a variable optical power (Column 9, rows 44-60, tuning is adjusting the power along the mirror). An optical element (72) having a rotationally asymmetric surface wherein the reflection type variable optical property element and the optical element are arranged along a single traveling path of rays (shown with arrows) and are arranged to be decentered from one another.

Regarding Claim 117.

Gobeli discloses (Fig. 8,9,10) a plurality of variable optical-property elements (68,70) each having a variable optical power (Column 9, rows 44-60, tuning is adjusting the power along the mirror), an optical element (72) having a rotationally asymmetric optical surface, wherein the plurality of variable optical-property elements and the optical element are arranged along a single traveling path of rays, and wherein the variable optical-property elements (68,70) and the optical element (72) are decentered from one another. Wherein the rotationally asymmetric optical surface (72) is a smooth surface (shown below in response to argument)

Regarding claim 41.

Gobeli discloses (Fig. 8,9,10) A variable optical-property element (68,70) and a plurality of rotationally asymmetric curved surfaces wherein the variable optical-property element (68,70) and a plurality of rotationally asymmetric curved surfaces are arranged

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along a single traveling path of rays and wherein the variable optical-property element is arranged to be decentered from an optical axis of the optical system (72)

Regarding Claim 88.

Gobeli discloses (Fig. 8,9,10) the rotationally asymmetric curved surfaces of the optical element (68,70) are reflecting surfaces and are arranged to be decentered from the optical axis of the optical system (72).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 126 is rejected under 35 U.S.C. 102(b) as being anticipated by Stein (US 3666881).

Stein discloses (Fig. 1) a transparent optical element (liquid crystal cell) having an entrance surface (10) and an exit surface (where 53 is located) that is different from the entrance surface; and a reflection type variable optical property element (Column 1, rows 30-65) having a variable optical power, the reflection type variable optical property element arranged integrally with the transparent optical element wherein the transparent optical element and the reflection type variable optical property element are configured such that light enters the optical element through the entrance surface, where is

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reflected at the reflection type variable optical property element, and then exits out of the transparent optical element through the exit surface.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 42,48,98 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Gobeli (US 4932768) in view of Shen et al (US 5198653)

Gobeli does not disclose an image sensor.

Shen et al discloses (Frontpage) an image sensor (50) on a surface of the optical element (12).

It would have been obvious to one of ordinary skilled in the art to modify Gobeli to include an image sensor by Shen et al motivated by the desire to compensate for distortion (abstract).

Claim 42,48,92,98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Togino (US 5513041) in view of Shen et al (US 5198653)

Togino does not disclose an image sensor.

Shen et al discloses (Frontpage) an image sensor (50) on a surface of the optical element (12).

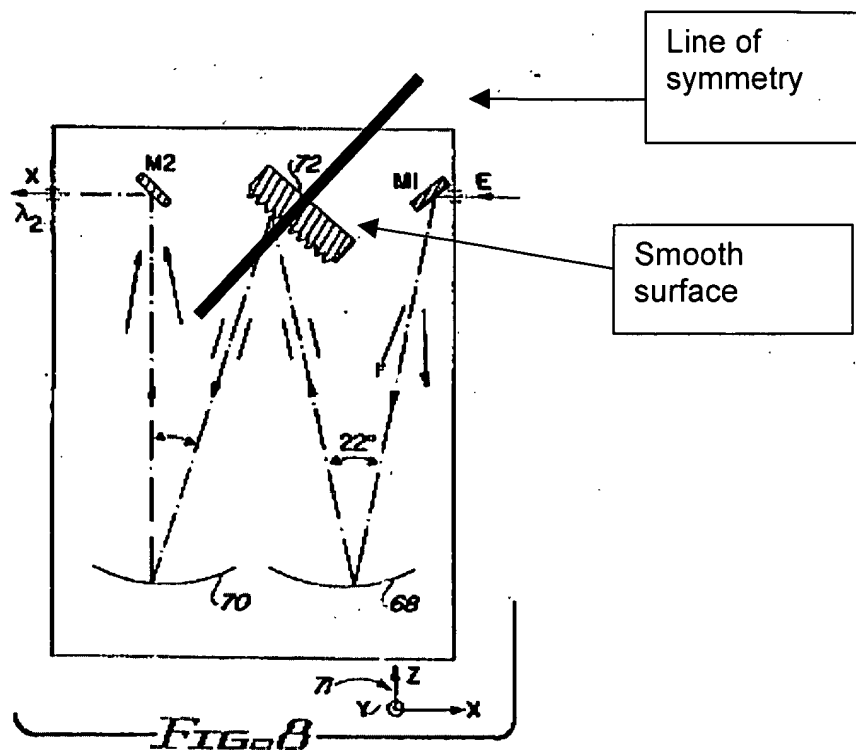
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It would have been obvious to one of ordinary skilled in the art to modify Togino to include an image sensor by Shen et al motivated by the desire to compensate for distortion (abstract).

Response to Arguments

Applicant's arguments that "Togino does not disclose that the mirror 3 has a reflecting surface that is deformable." Is not persuasive. The mirror is known to have a reflecting surface (shown reflecting light). The mirror with a reflecting surface is deformable. As shown in the drawing the reflecting surface of the mirror is bent into a U shape. Therefore, it has a deformable structure: to alter the shape of.

Applicant's arguments that "Gobeli discloses a rotationally asymmetric surface having two planes of symmetry" is not persuasive. The undulation structure makes the structure asymmetric also is part of element (72) and has one line of symmetry as shown below.



Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy P. Chien whose telephone number is 571-272-8579. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lucy P Chien
Examiner
Art Unit 2871


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